Sustaining greater harmony between agriculture and the environment

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Sustaining greater harmony between agriculture and the environment

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources			5%	5%
102	Soil, Plant, Water, Nutrient Relationships			6%	6%
112	Watershed Protection and Management			16%	16%
125	Agroforestry			4%	4%
133	Pollution Prevention and Mitigation			15%	15%
135	Aquatic and Terrestrial Wildlife			20%	20%
216	Integrated Pest Management Systems			21%	21%
403	Waste Disposal, Recycling, and Reuse			8%	8%
610	Domestic Policy Analysis			5%	5%
	Total			100%	100%

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	22.1	10.0
Actual	0.0	0.0	23.0	10.0

2. Institution Name: Alabama A&M University

Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	410283
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	410283
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

2. Institution Name: Auburn University

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Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
0	0	1529381	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	1529381	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

2. Institution Name: Tuskegee University

Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
0	0	0	207914
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	0	207914
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

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V(D). Planned Program (Activity)

1. Brief description of the Activity

Research was directed at better ways of: managing agricultural wastes; promoting agro-(or eco-) tourism; and analyzingland and water use patterns and resources.Research results were shared with extension personnel for further dissemination, particularly to county agents, producers, industry leaders, policy-makers, citizens, and related federal agency personnel. Additional dissemination of results was through direct contact (such as demonstrations and community meetings), through publications (experiment station bulletins, on-line reports, press releases, as well as scientific journal articles), and may include non-traditional efforts, such as working through community and faith-based groups.

Research at Tuskegee University continues to focus on the long term effects of the application of broiler litter with high levels of trace elements to agricultural lands and its effect on ground water contamination.

Scientists at Auburn University are conducting research that focuses on water quality and waste management issues, ozone studies, improved farm management through precision agriculture and remote sensing. A new study was initiated in 2008 to determine the effects of tropospheric ozone and various climate change (precipitation) on a semi-natural grassland characteristic of the Piedmont region of the US.

Alabama A&M University researchers continue to evaluate the utilization of composted poultry litter on the production of alternative crops such as shiitake mushrooms and in agronomic crops such as cotton to improve productivity and find ways of disposal of poultry waste.

The metal loading in selected streams in the lower Tallapoosa basin is being evaluated by researchers at Tuskegee University to determine total trace and heavy metal levels in the water, sediments and fish in the four streams.

DNA fingerprints of fecal bacteria are being obtained by researchers at Auburn University for bacterial source tracking. Sources include wildlife as well as livestock and farm animals.This information can be used to develop effective pollution control strategies and ensure pollution control efforts are directed at the correct source(s).

Scientists at Alabama A&M University have evaluated the impact of poultry waste applied to land. The ultimate goal of this research is to define optimal levels of nutrient concentrations, as well as enteric pathogens for safe disposal and the improvement of soil and water quality.

Auburn researchers are developing methods for evaluating litter volatilization.Such techniques will also attribute to improvements in energy and resource utilization in poultry facilities to increase profitability without degrading air quality or animal well being.

Research at Auburn University has pinpointed nitrogen rates needed for optimal establishment and maintenance of some of the newer cultivars of hybrid bermudagrass.

Termites are a serious threat to urban building structures.Auburn University researchers are developing measures to counter the rapid spread of termites.

Studies at Tuskegee University show that plastic mulch may reduce skinning of sweetpotatoes and reduce surface rot in storage. Studies also show that thermoplastic polyurethane film improves the soil solarization process better than the low density polyethylene in Alabama and can be used effectively against soil borne pests of vegetable crop production.

Studies at Auburn University continue to evaluate insecticide use and cultivar selection on the intensity of tomato spotted wilt, the use of which has successfully led to declines in TSW occurrence.

Insect pests continue to be important production constraints on vegetable crops grown by limited resource farmers in many parts of the southern US. Research at Tuskegee University continues to seek improvement in the production and utilization of sweetpotatoes by reducing loss caused by the insects and diseases through an integrated pest management approach.

Auburn University researchers continue to work with forest industries in developing technologies, arising from precision agricultural applications, to assist with seedling counts during planting season.

The Eurasian collared dove is a recent exotic introduction to Alabama that may compete with the native mourning dove. This competition could negatively impact the recreational and economic value of native species.Interactions among Eurasian collared doves, mourning doves, and rock doves were studied to determine if the collared dove is filling an unexploited niche or will detrimentally affect other species.

2. Brief description of the target audience

Producers, industry leaders, policy-makers, citizens, and related federal agency personnel.

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V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	**Target**	**Target**	**Target**	**Target**
Plan	1200	9000	300	900
2008	1500	10000	500	1000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2008:	2

Patents listed

1. Treated Biodiesel Glycerin;
2. Biological Control of Channel Catfish Disease in Aquaculture Systems

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	0	50	
2008	0	150	150

V(F). State Defined Outputs

Output Target
Output #1

Output Measure
publications

Year	Target	Actual
2008	25	150

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V(G). State Defined Outcomes

O No.	Outcome Name
1	Estimated tourism receipts = $7.6 billion in 2005. Success of this program will result in maintenance or increase in revenue (medium term outcome).
2	Fish consumption advisories in sampled waters = 26 instances in 2004 (ADEM water board). Success of this program will result in decline of water contaminants that accumulate in fish, and consumption advisories will also subsequently decline. (Long-term outcome)
3	Incidence of ground water contamination of ~ 5000 sampled sites = 20% in 2002-2003. Success of this program will result in a decline of contaminant incidence (medium term outcome).

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Outcome #1

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area

V(H). Planned Program (External Factors)

External factors which affected outcomes

Natural Disasters (drought,weather extremes,etc.)
Economy
Appropriations changes
Public Policy changes
Government Regulations
Competing Public priorities
Competing Programmatic Challenges
Populations changes (immigration,new cultural groupings,etc.)

Brief Explanation

Climate change has had a major impact on the environment.The economic crisis may affect agricultural practices.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

Retrospective (post program)
During (during program)

Evaluation Results

Satisfactory results were achieved.

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Key Items of Evaluation